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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,203	01/29/2001	Sharron Gaynor Penn	AEOMICA-1	7320
1473	7590	10/06/2003	EXAMINER	
FISH & NEAVE			CLOW, LORI A	
1251 AVENUE OF THE AMERICAS			ART UNIT	
50TH FLOOR			PAPER NUMBER	
NEW YORK, NY 10020-1105			1631	

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/774,203	PENN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Lori A. Clow, Ph.D.	1631	

**-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-92 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-14 , drawn to a single nucleic acid microarray, classified in class 435, subclass 174.
- II. Claims 15-18, drawn to a method of identifying genes in a eukaryotic genome, classified in class 702, subclass 20.
- III. Claims 19-20, drawn to a visual display of eukaryotic genomic sequence, classified in class 382, subclass 129.
- IV. Claims 21-52, drawn to a high throughput microarray method to confirm predicted exons, classified in class 435, subclass 287.2.
- V. Claim 53, drawn to a method of identifying potential false positive exon predictions, classified in class 435, subclass 6.
- VI. Claim 54, drawn to a method of identifying one or more genes expressed by one or more eukaryotic cells having a genome that averages at least one intron per gene, classified in class 435, subclass 6.
- VII. Claim 55, drawn to a method of identifying one or more genes expressed by one or more human cells, classified in class 435, subclass 6.
- VIII. Claims 56-58 and 92, drawn to a high throughput microarray based method of grouping exons into a common gene and the nucleic acid grouped with the method, classified in class 435, subclass 287.2.
- IX. Claim 59, drawn to a nucleic acid microarray with a plurality of single exon probes, classified in class 435, subclass 287.2.

- X. Claim 60, drawn to a nucleic acid microarray with at least 5000 addressable locations, classified in class 435, subclass 287.2.
- XI. Claims 61-81, drawn to a single exon nucleic acids microarray wherein at least 50% of the probes include genomic sequence, classified in class 435, subclass 287.2.
- XII. Claims 82-91, drawn to a software data structure for annotating nucleic acid sequence with confirmed bioinformatic predictions, classified in class 702, subclass 19.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Groups II, IV, V, VI, VII, and VIII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are drawn to different method steps each with their own purposes which are different from any of the other outcomes.

Inventions of Group I and Group II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the microarray of Group I is not specific for the method of Group II. As there are no specific nucleic acid sequences required by said claims, the method of Group II could be practiced with any known microarray.

The inventions of Group I and Group III are unrelated in that the microarray of Group I has no relation to a visual display system, as set forth in Group III.

The inventions of Group I and Group IV are unrelated in that the two micorarrays comprise different elements.

The inventions of Group I and V are unrelated in that the method of Group V does not require the microarray of Group I.

The inventions of Group I and VI are unrelated in that the microarray of Group I is not used in the method of Group VI.

The inventions of Group I and VII are unrelated in that the method of Group VII does not require the microarray of Group I.

The inventions of Group I and VIII are unrelated in that the method of Group VIII does not require the microarray of Group I.

The inventions of Group I and Group IX are unrelated in that the two microarrays comprise different elements.

The inventions of Group I and Group X are unrelated in that the two microarrays comprise different elements.

The inventions of Group I and Group XI are unrelated in that the two microarrays comprise different elements.

The inventions of Group I and Group XII are unrelated in that the invention of Group I is a microarray with nucleic acid sequences and the invention of Group XII is a software structure for annotating sequences. The microarray of Group I is not necessary for the software program of Group XII.

The invention of Group II is unrelated to the invention of Group III in that the method of identifying genes has nothing to do with a physical display of a genomic sequence.

The inventions of Group II and Group IX are unrelated in that the method does not require the microarray of Group IX.

The inventions of Group II and Group X are unrelated in that the method does not require the microarray of Group X.

The inventions of Group II and Group XI are unrelated in that the method does not require the microarray of Group XI.

The inventions of Group II and Group XII are unrelated in that the method of identifying genes in a genome requires different steps than that of a software program to annotate nucleic acid sequences.

The inventions of Group III and Group IV are unrelated in that the microarray of Group IV has no relation to a visual display system, as set forth in Group III.

The inventions of Group III and Group V are unrelated in that the visual display system of Group III has nothing to do with the method of Group V.

The inventions of Group III and Group VI are unrelated in that the visual display system of Group III has nothing to do with the method of Group VI.

The inventions of Group III and Group VII are unrelated in that the visual display system of Group III has nothing to do with the method of Group VII.

The inventions of Group III and Group VIII are unrelated in that the visual display system of Group III has nothing to do with the method of Group VIII.

The inventions of Group III and Group IX are unrelated in that the visual display system of Group III does not require the microarray of Group IX.

The inventions of Group III and Group X are unrelated in that the visual display system of Group III does not require the microarray of Group X.

The inventions of Group III and Group XI are unrelated in that the visual display system of Group III does not require the microarray of Group XI.

The inventions of Group III and Group XII are unrelated in that the display system of Group III is in no way linked to the software program of Group XII.

The inventions of Group IV and Group IX are unrelated in that the method of Group IV does not require the microarray of Group IX.

The inventions of Group IV and Group X are unrelated in that the method of Group IV does not require the microarray of Group X.

The inventions of Group IV and Group XI are unrelated in that the method of Group IV does not require the microarray of Group XI.

The inventions of Group IV and Group XII are unrelated in that the method of Group IV is not employed in the software annotation of Group XII.

The inventions of Group V and Group IX are unrelated in that the method of Group V does not require the microarray of Group IX.

The inventions of Group V and Group X are unrelated in that the method of Group V does not require the microarray of Group X.

The inventions of Group V and Group XI are unrelated in that the method of Group V does not require the microarray of Group XI.

The inventions of Group V and Group XII are unrelated in that the method of Group V is not employed in the software annotation of Group XII.

The inventions of Group VI and Group IX are unrelated in that the method of Group VI does not require the microarray of Group IX.

The inventions of Group VI and Group X are unrelated in that the method of Group VI does not require the microarray of Group X.

The inventions of Group VI and Group XI are unrelated in that the method of Group VI does not require the microarray of Group XI.

The inventions of Group VI and Group XII are unrelated in that the method of Group VI is not employed in the software annotation of Group XII.

The inventions of Group VII and Group IX are unrelated in that the method of Group VII does not require the microarray of Group IX.

The inventions of Group VII and Group X are unrelated in that the method of Group VII does not require the microarray of Group X.

The inventions of Group VII and Group XI are unrelated in that the method of Group VII does not require the microarray of Group XI.

The inventions of Group VII and Group XII are unrelated in that the method of Group VII is not employed in the software annotation of Group XII.

The inventions of Group VIII and Group IX are unrelated in that the method of Group VIII does not require the microarray of Group IX.

The inventions of Group VIII and Group X are unrelated in that the method of Group VIII does not require the microarray of Group X.



The inventions of Group VIII and Group XI are unrelated in that the method of Group VIII does not require the microarray of Group XI.

The inventions of Group VIII and Group XII are unrelated in that the method of Group VIII is not employed in the software annotation of Group XII.

The inventions of Group IX and Group X are unrelated in that the two microarrays contain different elements.

The inventions of Group IX and Group XI are unrelated in that the two microarrays contain different elements.

The inventions of Group IX and Group XII are unrelated in that the software annotation system of Group XII does not require a microarray of Group IX.

The inventions of Group X and Group XI are unrelated in that the two microarrays contain different elements.

The inventions of Group X and Group XII are unrelated in that the software annotation system of Group XII does not require a microarray of Group X.

The inventions of Group XI and Group XII are unrelated in that the software annotation system of Group XII does not require a microarray of Group XI.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lori A. Clow, Ph.D. whose telephone number is 703-306-5439. The examiner can normally be reached on Monday thru Friday, 10:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on 703-308-4028. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

*Lori A. Clow*  
1631

MARJORIE MORAN  
PATENT EXAMINER

*Marjorie A. Moran*